ATTACHMENT A -- SPECIFICATION CHANGES

The following page is a copy of page 1 from the original application, marked-up to show revisions to the specification that are being presented in the present Amendment.

ANALOG AND NEURAL NETWORK COMPUTATION USING DNA

CROSS-REFERENCES TO RELATED APPLICATIONS

5   This application is a continuation-in-part of U.S. now U.S. Patent No. 6,150,102 that issued November 21, 2000 Application Serial Number 09/078,761 filed May 15, 1998, which

is a continuation-in-part of U.S. Application Serial Number now U.S. Patent No. 6,083,726 that issued July 4, 2000 09/018,248 filed February 3, 1998. This application also

claims the benefit of the filing date of U.S. Provisional

10   Application Serial Number 60/086,654 filed May 26, 1998.

FIELD OF THE INVENTION

This invention provides methods for DNA analog

representation of vector operations, including vector

15   addition, determination of inner and outer products of

vectors, and of the product of a matrix and a vector, using

negative as well as non-negative numbers. The methods of the

present invention utilize the spectrum of biochemical

activities and operations which DNA molecules are capable of

20   undergoing, including base-specific Watson-Crick hybridiza-

tion, ligation, polymerase extension, site-specific strand

cleavage via restriction enzymes, melting of duplex DNA,

cleavage of DNA by site-specific endonucleases, and degrada-

tion of DNA by exonucleases of broad sequence specificity.

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